

PRELIMINARY HEALTH ASSESSMENT
YAKIMA AGRICULTURAL RESEARCH LAB
YAKIMA, WASHINGTON
NOVEMBER 18, 1988



Prepared by:
Office of Health Assessment
Agency for Toxic Substances and Disease Registry (ATSDR)

Background

The Yakima Agricultural Research Lab Site (YARL) is listed by the U.S. Environmental Protection Agency on the National Priorities List. The 10-acre site is located in Yakima (Yakima County), Washington. YARL is affiliated with the U.S. Department of Agriculture and develops pesticides for various fruits and vegetables. Pesticide wastes and solvents were discharged to a septic tank and drainfield disposal system at the facility from 1965 to 1985. Access to the site is unrestricted. Removal actions have not occurred.

The following document was reviewed by ATSDR: Resource Conservation and Recovery Act Facility Assessment, June 1988. This document forms the basis of this Preliminary Health Assessment.

Environmental Contamination and Physical Hazards

Preliminary on-site sampling results have identified various pesticides in septic tank water and subsurface soil. Off-site sampling has not been performed. Physical hazards were not reported.

Potential Environmental and Human Exposure Pathways

Potential environmental pathways include those related to contaminated groundwater, surface water, on-site soils, and volatilization of contaminants in ambient air. In addition, bioaccumulation of contaminants in fish may be another environmental pathway.

Potential human exposures to contaminants include ingestion of and direct contact with groundwater, surface water, soil, and possible ingestion of bioaccumulated contaminants in the food chain. In addition, inhalation of volatilized contaminants or contaminants entrained in air is another potential source for human exposure.

Demographics

There are about 50,000 people living within a 3-mile radius of the site. The distance from YARL to the nearest residence is across the street. There are 60 employees that work at YARL. Areas surrounding YARL are zoned residential and there is planned development for the nearby vicinity.

Evaluation and Discussion

Potable water from private wells is used within the vicinity of the site. There is concern by the surrounding community that pesticides may be leaching into the shallow drinking water aquifer. Private wells within the vicinity of the site have not been sampled for site-related contaminants. Municipal wells are not in use within the vicinity of the site.

Surface water is not located on-site. However, area surface water exists off-site and is used for fishing and irrigation. It has been reported that groundwater beneath YARL flows to the south about a half mile towards Wide Hollow Creek.

It has been reported that air is not considered to be a pathway of concern because contaminants were introduced to the soil 2 feet below the ground's surface. There are no plans to conduct off-site media sampling for site-related contaminants. Air sampling measurements should be taken before, during, and after removal operations take place in order to safeguard the possibility of unnecessary contaminant exposure to remediation workers, on-site employees, and possibly nearby residents.

Alfalfa is grown on-site for test purposes and is contaminated. Off-site food chain sampling (e.g., fishing, crops) has not been performed. ATSDR has prepared, or will prepare Toxicological Profiles on the site contaminants noted above.

Conclusions and Recommendations

Based on available information, this site is considered to be of potential public health concern because of the risk to human health caused by the possibility of human exposure to hazardous substances. At a minimum, future investigations of this site should include a characterization of the site and site contaminants, an area well survey, and a characterization of the hydrogeology of the area.

Further environmental characterization and sampling of the site and impacted off-site areas during the Remedial Investigation and Feasibility Study (RI/FS) should be designed to address the environmental and human exposure pathways discussed above. When additional information and data such as the completed RI/FS are available, such material will form the basis for further assessment by ATSDR as warranted by site-specific public health issues.